

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**Elsinore LP**

for an exemption from §§ 25.785(d),  
25.813(b), and 25.857(e) of the Federal  
Aviation Regulations

**Regulatory Docket No. 28669**

**GRANT OF EXEMPTION**

By letters dated August 22, 1996, February 4, 1997, and March 14, 1997, Mr. Cole Eminger, Elsinore DAS Staff Specialist, Systems & Equipment, Elsinore LP, John Wayne/Orange County Airport, 19300 Ike Jones Road, Santa Ana, CA 92707, petitioned for exemption from the requirements of §§ 25.785(d), 25.813(b), and 25.857(e) of the Federal Aviation Regulations (FAR) for certain Airbus Model A300 series airplanes with passenger-to-freighter conversions, for the accommodation of up to a total of four supernumeraries in the forward main deck cargo compartment.

**Sections of the FAR affected:**

Section 25.785(d) at Amendment 25-32 requires, in pertinent part, that there be a firm handhold to enable occupants to steady themselves when using the aisles in moderately rough air.

Section 25.813(b) at Amendment 25-32 requires, in pertinent part, that each passenger emergency floor level exit equipped with an assist means have an assist space next to it.

Section 25.857(e) at Amendment 25-32 requires, in pertinent part, that when a Class E cargo compartment is installed on the airplane, the airplane is used for carriage of cargo only.

### **Related Sections of the FAR**

Section 121.583(a) contains, in pertinent part, a listing of categories of the people who may be carried aboard an airplane in part 121 service without complying with all the passenger-carrying airplane requirements of part 121.

### **The petitioner's supportive information is as follows:**

“In accordance with the provisions of § 11.25, Elsinore LP of Santa Ana, California, hereafter designated "Elsinore," hereby petitions the Federal Aviation Administration (FAA) for an exemption from compliance with the requirements of §§ 25.857(e), 25.785(d), and 25.813(b) pursuant to the issuance of a supplemental type certificate (STC) for the conversion of Airbus A300B2/B4-200 series and A300-600 series aircraft from passenger to freighter configurations. The requested exemption will permit the accommodation for up to four supernumerary occupants in the forward main deck compartment, immediately aft of the cockpit.

### **SECTIONS OF THE FAR AFFECTED**

Section 25.857(e), as amended by Amendment 25-60, effective May 16, 1986

“A Class E cargo compartment is one on airplanes used only for the carriage of cargo...”

Section 25.857(e)(2) through (e)(5) further defines the specific requirements for a Class E cargo compartment. Exemption from compliance with the requirements of these sections is not requested.

Section 25.785(d), as amended by Amendment 25-20, effective March 22, 1970

“If the seat backs do not have a firm hand hold, there must be a hand grip or rail along each aisle to enable occupants to steady themselves while using the aisle in moderately rough air.”

Section 25.813(b), as amended by Amendment 25-32, effective February 24, 1972

“For each passenger exit ... there must be enough space next to the exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required for the exit.”

## DESCRIPTION OF THE AIRPLANE TO BE MODIFIED AND COVERED BY THE REQUESTED EXEMPTION

The Airbus A300B2/B4-200 series and A300-600 series are pressurized, transport category aircraft powered by two turbofan engines, and are included on Type Certificate Data Sheet A35EU, first issued on May 30, 1974. The modifications to the subject aircraft will include removal of the existing passenger interior, structural improvements to strengthen the floors and fuselage, revision of aircraft systems, and the installation of cargo handling equipment and other furnishings on the main deck to support all-cargo operations.

As a customer option associated with this modification, it is intended to offer accommodations to permit the seating of up to four supernumerary occupants. This “courier station” will include seating in an existing flight attendant’s seat on the aft face of the forward lavatory, and aft-facing seats within a new “courier module” that will replace an existing forward galley unit. The proposed seating module will be very similar in design to a unit previously FAA-approved for installation on FEDEX’s Airbus A310-203/-221/-222 converted freighter aircraft and A300F4-600R production freighters. All of the seating is located in an area aft of the flight deck and forward of the cargo area on the main deck. Except for the sections from which exemption is requested, all design criteria applicable to the carriage of passengers have been taken into account in the design of this seating arrangement.

The seating area is separated from the cargo area by a 9g safety net which protects the occupants from injury due to cargo movement in a crash. A smoke barrier curtain is co-located with the safety net to protect occupants from injury due to penetration of smoke or noxious gases in the event of a fire in the main deck cargo compartment. The two forward doors, one on either side of the fuselage and both equipped with escape slides, remain operable and will serve as emergency exits for the seating area. An independent oxygen system will be provided for the supernumerary occupants. This system will be capable of providing oxygen for all supernumerary occupants for the maximum possible duration. The oxygen masks of this system will be automatically deployed and presented to the supernumerary occupant as required by the pertinent portions of § 25.1447. Two-way communication with the flight deck is possible through dedicated communications panels, as required by the applicable FAR’s.

The supernumerary occupants will not be carried on a fare basis, but rather will perform a valuable function in support of the cargo operation. These occupants could include, but are not limited to, cargo loading technicians, animal handlers, flight mechanics, reserve flightcrew, military honor guards, etc. The Airplane Flight Manual Supplement for the modified A300B2/B4-200 series and A300-600 series aircraft will define the conditions under which supernumeraries may be carried and will include specific briefing

instructions for these occupants. Elsinore believes that an equivalent level of safety with the sections from which relief is sought will be achieved by these instructions and by the incorporation of appropriate design precautions.

## EXTENT OF REQUESTED REGULATORY RELIEF

The primary purpose of this request for exemption is to permit the carriage of supernumerary occupants on an all-cargo airplane. This is the direct reason for requesting exemption from compliance with the requirements of § 25.857(e). The other sections for which exemption from compliance is sought are directly related to this request. Exemption from compliance with the FAR's is sought to the following extent:

Section 25.857(e); relief is sought to permit the carriage of up to four supernumerary occupants on an all-cargo airplane.

Section 25.785(d); the seat backs of the supernumerary's seats are not accessible to occupants in the aisle and no other hand hold or rail is provided.

Section 25.813(b); adequate evacuation assist space may not be available at the emergency exits in the event that the cargo load has shifted forward as a result of a survivable crash.

## SUPPORTING ARGUMENTS

1 The cargo operators have a requirement for a number of support personnel, necessary for the safe and/or proper handling of cargo during the loading and off-loading processes. Such personnel are obviously required at both the departure and destination of a cargo flight. This is particularly important when the cargo includes perishable or hazardous cargo, or live animals. The most efficient way to ensure the availability of qualified cargo handlers at the destination is to transport these personnel aboard the cargo flight. The missions of the cargo operators often include the carriage of live animals, or valuable, perishable, or hazardous cargo that requires periodic attendance during the flight. The presence of specially trained personnel who are qualified to perform this function on the aircraft is necessary to ensure safe and efficient operations. Cargo operators periodically have a requirement for qualified maintenance personnel on board the aircraft, particularly when operating into remote destinations. The operators will optimize their missions and increase the safety of their operations if they are permitted to carry qualified maintenance personnel on cargo flights.

Operating requirements frequently require occupancy of all available flight deck seats by flight crewmembers and FAA flight inspectors. Additionally, a requirement for cargo handling personnel, cargo attendants, and maintenance personnel in any combination and number in excess of the available flight deck jump seat capability (up to the

proposed occupancy limit) could occur. The only available location for additional seating to support these personnel is the proposed “courier station.” Except for the sections from which exemption is requested, all design criteria applicable to the carriage of passengers have been taken into account in the design of this seating arrangement. The presence of the supernumerary occupants does not preclude compliance with § 25.857(e)(2) through (e)(5), which contain the specific requirements for the cargo compartment.

2. Although the seat backs of the seats within the “courier module” are not accessible as hand holds and no other hand holds or rails are provided on the seats, the arrangement of the new module is very similar to the galley/lavatory unit that it replaces. The seating module is located aft of the flight deck, and adjacent to the right-side forward cabin door. The inboard wall of the unit, combined with the inboard wall of the retained left-side lavatory, forms a short aisle between the forward door cross-aisle and the flight deck door. This arrangement is very similar to the pre-modification configuration. Handholds are available on the seating module to permit safe transit through the aisle. Therefore, an equivalent level of safety with the requirements of § 25.785(d) is provided.

3. The FAR’s pertinent to the subject STC, as well as the unmodified airplane, take into account the carriage aboard commercial flights of:

- crewmembers, including flightcrew and cabin attendants, who are each assigned duties associated with the operation of the airplane,
- passengers, some of whom have no expected ability to use the emergency provisions and therefore must be attended.

The persons who would occupy the supernumerary seating area on the modified A300B2/B4-200 series and A300-600 series aircraft are trained aviation professionals. Furthermore, these personnel will be briefed in autonomous use of the emergency equipment, emergency exit operation, and evacuation. The operator will be required to limit access to these seats to those personnel who can perform these functions without assistance. Therefore, the assist space required by § 25.813(b) for assisting passengers in evacuation is not necessary. To ensure ease in emergency door operation and evacuation, both exit doors are equipped with power assist opening systems and self-deploying slides. Thus, an equivalent level of safety with §25.813(b) is provided.

#### ACTIONS TAKEN TO ENSURE EQUIVALENT LEVEL OF SAFETY

In order to guarantee compliance with the conditions provided in support of this petition, Elsinore will include in the FAA-approved Airplane Flight Manual Supplement for the modified A300B2/B4-200 series and A300-600 series aircraft, an operating

limitation restricting the total occupancy of the airplane to nine. Occupancy of the supernumerary seat positions will be limited to occupants designated by the operator who are;

1. Included in one of the following categories:

- a) A crewmember
- b) A company employee
- c) An FAA air carrier inspector or an authorized representative of the National Transportation Safety Board (NTSB), performing official duties
- d) A person traveling to or from assignment who is necessary for:
  - i) the safety of the flight;
  - ii) the safe handling of animals;
  - iii) the security of valuable or confidential cargo;
  - iv) the preservation of fragile or perishable cargo;
  - v) the experiments on, or testing of, cargo containers or cargo handling devices;
  - vi) the operation of special equipment for loading or unloading cargo;
  - vii) the loading or unloading of outsized cargo.
- e) A person performing duty as an honor guard accompanying a shipment made by or under the authority of a government or military agency,
- f) A military courier, military route supervisor, military cargo contract coordinator, or flightcrew member of a military cargo contract air carrier or commercial operator, carried by military cargo contract air carrier or commercial operator in operations under a military cargo contract, if that carriage is specifically authorized by the appropriate armed forces,
- g) Any other person, for whom the operator has obtained due FAA authorization from the Administrator.

2. Found by the operator to have demonstrated physical ability to autonomously use the emergency provisions;

3. Instructed by the operator, in accordance with FAA-approved procedures, in the autonomous use of the emergency provisions, and orally briefed before each takeoff by an appropriate crewmember as to the location and use of the emergency exits and emergency equipment.

#### **PUBLIC INTEREST**

The public stands to benefit from granting the requested exemption. The carriage of supernumerary occupant aboard the modified A300B2/B4-200 series and A300-600 series all-cargo airplane will lead to increased efficiency and a higher level of operational safety. The utility of the cargo airplane will be improved and the operators will benefit from substantial cost savings in the transportation of personnel in support of cargo operations. The content of this petition for exemption is similar to those for which exemptions have been previously granted by the FAA. Hence, precedent would not be established by granting the requested exemption.

Therefore, granting of the requested exemption will be in the public interest, as required by § 11.27(e).”

Notwithstanding the petitioner's arguments in favor of waiving the noted publication and comment requirements, the FAA considers that these requirements may, in fact, be observed without undue delay or adverse effect on either the petitioner or its customers. Accordingly, a summary of Elsinore LP's May 11, 1994, petition was published in the Federal Register on October 4, 1996 (61 FR 52082). No comments were received.

#### **The FAA's analysis/summary is as follows:**

(Note is made that the petitioner initially intended to include flightdeck supernumerary occupancy within the scope of the petition. However, no supporting data concerning those intended accommodations were provided in the petition, and in response to the FAA's request for clarification, the petitioner requested that the scope of the petition be reduced to address only main deck supernumerary occupancy. Accordingly, the FAA's analysis and finding are necessarily confined only to the subject of accommodations for supernumerary occupants on the main deck, and no inference should be drawn that this grant of exemption in any way addresses or permits flightdeck supernumerary accommodations. Additionally, in response to further inquiries relating to the airplane model applicability in the initial petition, the petitioner requested that the range of applicable airplane models be reduced to that specified below.)

Part 25 aircraft certification regulations do not address occupants other than crew and passengers. Accordingly, the FAA has previously granted petitions for exemption to allow the carriage of persons in addition to flightcrew on freighter airplanes, provided

there was a public interest in doing so, and certain conditions were met to assure an adequate level of safety. Those conditions have varied, depending on the airplane design, the nature of the proposals under consideration, and the number of persons involved.

The petitioner has requested relief from the requirements of § 25.857(e), which permit carriage of only cargo when a class E cargo compartment is installed on the airplane. Class E cargo compartments are separate from the flight deck and generally encompass the entire remaining interior of the airplane. Aircraft design standards for Class E cargo compartments reflect the intention that fires that might occur in this type of cargo compartment are to be controlled by starving the fire of oxygen. This is accomplished by depressurizing the airplane and maintaining a cabin altitude that will not support combustion. For this reason, only flight crewmembers are normally permitted on board such airplanes.

A major concern in permitting occupancy by non-crewmembers outside the flight deck on such airplanes is in assuring that there is a suitable means for preventing smoke penetration into this occupied area. Another concern is that the persons allowed on board the airplane are limited to those that are briefed on emergency equipment and procedures and are found by the operator to be both physically fit and willing to use the emergency equipment and means of emergency egress provided. The petitioner's design satisfies these concerns by providing a smoke curtain, and proposing appropriate limitations on the occupants.

With regard to the requirement of § 25.813(b) for an assist space adjacent to the emergency exits, the FAA considers that an assist space is not necessary in this case due to the absence of required flight attendants for whom the assist spaces were intended.

The requirement for handholds is to assure that occupants have a means to steady themselves in moderately rough air while traversing the main aisles of typical passenger airplanes. On the proposed airplanes, the occupied area is very small, with no aisles and nowhere to go, and it is possible to return to each seat very quickly. Therefore, the FAA concurs with the petitioner that it is not necessary to provide dedicated handholds beyond those that may be already incidentally available.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not significantly affect the level of safety provided by the regulations. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), Elsinore LP is hereby granted an exemption from §§ 25.785(d), 25.813(b), and 25.857(e) of the FAR. The petition is granted to the extent required to permit type certification of Airbus Model A300 series airplanes (Models B2-1A, B2-1C, B4-2C, B2K-3C, B4103, B2-203, and B4-203 only ) converted from passenger to



freighter configurations, with accommodation as proposed for the carriage of supernumeraries immediately aft of the flight deck, when the airplane is equipped with two floor-level exits with escape slides within the immediate vicinity of the occupied main deck area. The following additional limitations apply:

1. The airplane flight manual must contain a limitation that supernumerary occupancy outside of the flight deck is restricted to a maximum of four persons;
2. Occupants are limited to the categories specified in § 121.583(a)(1) through (7);
3. Prior to each flight, each occupant must be briefed by a flight crewmember on the use of the exits and emergency equipment; and
4. The operator must determine that each occupant is physically able to accomplish the necessary emergency procedures.

Issued in Renton, Washington, on

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